Washington State Senator • 34th Legislative District

Erik Poulsen

Alternative Energy Technology

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Standing Committees

Sen. Erik Poulsen represents the 34th District, which encompasses West Seattle, Burien and Vashon Island. He is chair of the Senate Water, Energy & Environment Committee, vice chair of the Senate Transportation Committee and a member of the Senate Health & Long-Term Care Committee.

Winter 2005

Dear Neighbors,

Thank you for the privilege of serving as your state senator! As the next legislative session approaches, I'm gearing up to help Washington achieve greater energy independence. This newsletter highlights some of the issues we're facing.

Recent news about the record profits of oil companies and other energy suppliers reminds me of the Enron scandal, which drove up electricity prices in the late '90s. Back then I was serving as Democratic Chair of the House Energy Committee. I'm proud to have played a central role in the Legislature's effort to derail Enron's devious deregulation scheme for Washington state, which could have cost us billions of dollars.

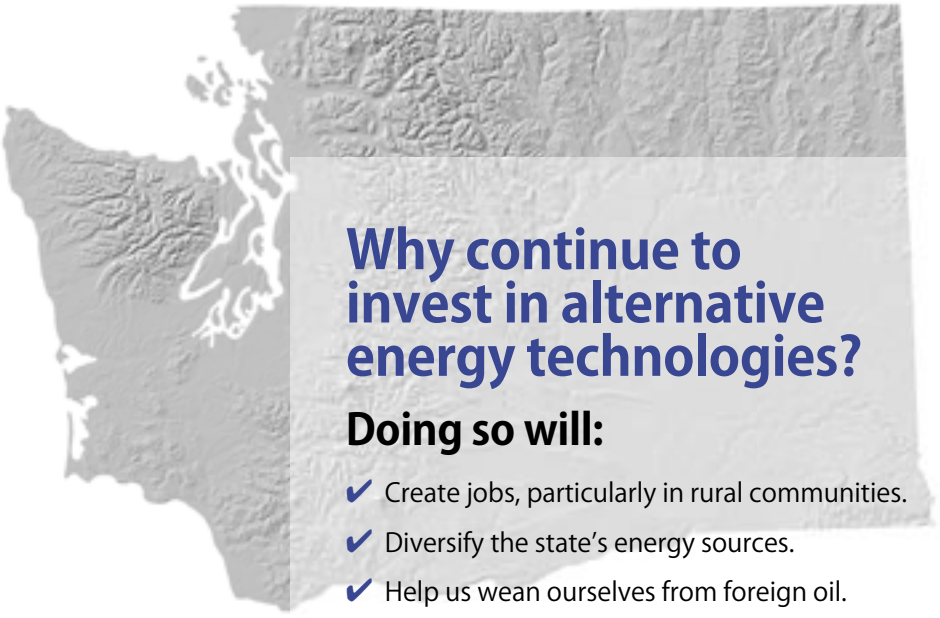
Today, we face a similar economic threat. Unless we take dramatic steps to lessen our dependence on fossil fuels – oil, coal and natural gas – we'll continue to be held hostage by soaring gas prices, cause damage to our environment, and threaten our national security.

Fossil fuels take millions of years to make. We are using up the fuels that were made more than 300 million years ago, before the time of the dinosaurs. Once they are gone, they are gone. That's why investing in renewable energy must be a top priority for Washington state this coming legislative session.

I'm interested to hear your comments and suggestions for how best to secure a clean, affordable energy future for Washington state. Let's keep in touch!

Sincerely,

Erik Poulsen



Why continue to invest in alternative energy technologies?

Doing so will:

- ✔ Create jobs, particularly in rural communities.
- ✔ Diversify the state's energy sources.
- ✔ Help us wean ourselves from foreign oil.
- ✔ Keep power affordable.
- ✔ Protect the environment.

Legislators hold joint hearing on alterative fuels

The gasoline price spikes and reduced U.S. refining capacity in the wake of hurricanes Katrina and Rita illustrate the dramatic effects that the increasing global demand for oil may cause as the sources of supply and distribution infrastructure fall short of meeting this demand.

Producing fuel from non-fossil fuel sources, such as biofuels, is an important element of a comprehensive strategy of energy diversification, conservation, fuel efficiency and other measures needed to respond to this energy challenge.

In October, I co-chaired a joint hearing of Senate and House committees to discuss Washington's potential to be a national leader in alternative fuels, particularly biofuels – because of our substantial agriculture production as well as our public and private research and development interests.

Some key points that came out of the hearing:

Imported oil

- Some $25 million leaves Washington every day to pay for imported oil, so it's in the state's best interest to develop alternative fuels that are produced locally.

Ethanol

- Washington is one of the major wheat-producing states in the country.
- A straw-based industry in Eastern Washington would have a significant positive economic impact on the region: The counties of Adams, Franklin, Grant and Lincoln would see an economic value added of $19.6 million.
- More than 100 million gallons of ethanol could be produced from just the straw in Whitman and Lincoln counties.
- In 2000, 12.3 million gallons of ethanol were used in the United States; in 2004, 22.9 million gallons were used.

Biodiesel

- Two feedstock crops, mustard and canola, are particularly well-suited for Eastern Washington, producing high yields without irrigation.
- In the three-county area near Spokane, there is the potential to put 500,000 acres into oilseed production. About 50 gallons of biodiesel can be produced per acre of canola or other seed crop, so there is the potential in this area alone to produce 25 million gallons of biodiesel.
- In 2000, 6.8 million gallons of biodiesel were used in the United States; in 2004, 36.6 million gallons were used.
- In Washington, annual biodiesel sales average 1.5 million gallons.

Information discussed at the hearing will spur a series of bills in the upcoming legislative session, which begins Jan. 9.

Alternative energy advances in the Washington state Legislature

Our state has been a leader for years in the area of alternative energy. Bills I've had the pleasure of sponsoring or helping pass include:

- ✔ **Stronger emission standards for new cars**: Beginning in 2009, Washington will join eight other states in requiring that new cars and light trucks sold in the state meet the stronger emission standards established by California. The standards will reduce emissions of gases such as carbon dioxide that contribute to global warming.
- ✔ **Alternative fuel and hybrid vehicles**: From 2009-2011, purchasers of hybrid vehicles and other alternative fuel vehicles will not pay the sales and use tax on those vehicles.
- ✔ **"Green buildings" standards**: This year Washington became the first state in the nation to require schools, universities and other public structures to be built to meet new energy efficiencies, water conservation and other environmental standards.
- ✔ **Encouraging the manufacture and production of renewable energy**: With small-scale windmill, solar panel and other alternative energy projects springing up around the state, we established a $2,000 incentive for individuals, businesses or local governments to invest in renewable power generation.
- ✔ **Net metering:** Requires that utilities purchase excess power from customers who have their own solar, wind and other renewable electricity systems.
- ✔ **Alternative fuels tax deduction**: A B&O tax deduction is available for the sale or distribution of biodiesel or alcohol fuel.

- ✔ **Alternative fuel vehicle (AFV) annual fee**: To encourage the use of nonpolluting fuels, owners of compressed natural gas- (CNG) and liquefied petroleum gas- (LPG) powered vehicles pay an annual license fee instead of motor fuel excise taxes.

- ✔ **Biofuels production tax exemption**: Investments in buildings, equipment and labor for the purpose of manufacturing biodiesel, biodiesel feedstock, wood biomass fuel or alcohol fuel are eligible for: a deferral of state and local sales and use taxes; an exemption from state and local property leasehold taxes; and a reduced B&O tax rate.

- ✔ **Clean school bus project**: Two school districts were selected to participate in a pilot project on the use of biodiesel with ultra low sulfur diesel (ULSD) in school buses. The Office of the Superintendent of Public Instruction will submit a report of its findings to the Legislature soon.

"Bio this" and "anaerobic that" — What does it all mean?

Alternative Energy Glossary

- **Anaerobic digester**: A device that promotes the decomposition or digestion of the organics in manure to simple organics and gaseous biogas products. The biogas can be used in an engine generator or in a hot water heater modified for biogas.
- **Biofuels**: Renewable energy sources made from biomass (plant matter such as trees, grasses, agricultural crops or other biological material) that can be used for transportation needs. The two most common types of biofuels are:
  - **Biodiesel**: Made by combining alcohol (usually methanol) with vegetable oil, animal fat or recycled cooking greases. It can be used as an additive to reduce vehicle emissions (typically 20 percent) or, in its pure form, as a renewable alternative fuel for diesel engines.
  - **Ethanol**: Made by fermenting any biomass high in carbohydrates such as corn, sugar cane, wheat or barley. It is the same type of alcohol found in beer and wine and is commonly used as a fuel additive to reduce carbon monoxide emissions from vehicles.
- **Biomass energy**: "Bioenergy" comes from plants and plant-derived materials. Wood is the largest biomass energy resource today. Other sources include good crops, grassy and woody plants, residues from agriculture or forestry, and the organic component of municipal and industrial wastes. It can be used for fuels, power production and products that otherwise would be made from fossil fuels.
- **Biopower**: Burning biomass directly, or converting it into gaseous or liquid fuels that burn more efficiently, to generate electricity.
- **Bioproducts**: Converting biomass into chemicals for making plastics and other products that typically are made from petroleum.
- **Coal gasification**: A process for converting coal partially or completely to combustible gases. After purification, these gases – carbon monoxide, carbon dioxide, hydrogen, methane, and nitrogen – can be used as fuels or as raw materials for chemical or fertilizer manufacture.
- **Geothermal energy**: Geothermal energy taps the Earth's internal heat for a variety of uses, including electric power production, and the heating and cooling of buildings.

(Continued on next page)

Alternative Energy Glossary — continued

- **Hydropower**: Flowing water creates energy that can be captured and turned into electricity, which is known as hydropower or hydroelectric power.
- **Solar energy**: Sunlight, or solar energy, can be used directly for heating and lighting homes and other buildings, for generating electricity, and for hot water heating, solar cooling, and a variety of commercial and industrial uses.
- **Tidal energy**: All coastal areas consistently experience two high and two low tides over a period of slightly greater than 24 hours. For those tidal differences to be harnessed into electricity, the difference between high and low tides must be more than 16 feet. There are only about 40 sites on the Earth with tidal ranges of this magnitude, and the Pacific Northwest is one of them.
- **Wave energy**: Wave power devices extract energy directly from surface waves or from pressure fluctuations below the surface. Renewable energy analysts believe there is enough energy in the ocean waves to provide up to 2 terawatts of electricity. (A terawatt is equal to a trillion watts.) Wave power can't be harnessed everywhere, but in the Pacific Northwest alone, it's feasible that wave energy could produce 40–70 kilowatts per meter (3.3 feet) of western coastline.
- **Wind energy:** A wind turbine, the windmill's modern equivalent, can use the wind's energy to generate electricity. Turbines catch the wind's energy with their propeller-like blades.

"I'd put my money on the sun and solar energy. What a source of power! I hope we don't have to wait 'til oil and coal run out before we tackle that."

Thomas Edison

Preview of 2006 legislative session

We will be considering legislation that:

- Helps low-income people pay their heating bills this winter.
- Expands tax incentives for those who produce biofuel.
- Encourages consumers to use alternative fuels.
- Assures the agriculture community that the demand for biofuel crops exists, as farmers shift to growing more of these crops.
- Encourages utilities to step up their mix of generation sources to include more renewables, such as wind and solar power, as well as biomass.

SPS#05-5751 SP, 12-05

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